

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/110259 A2

(51) International Patent Classification?: **A61B**
(21) International Application Number:
PCT/US2004/018482
(22) International Filing Date: 10 June 2004 (10.06.2004)
(25) Filing Language: English
(26) Publication Language: English
(30) Priority Data:
60/477,258 10 June 2003 (10.06.2003) US

(71) Applicant (for all designated States except US):
NEOMEDIX CORPORATION [US/US]; 27452 Calle
Arroyo, San Juan Capistrano, California 92675 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MITTELSTEIN, Michael** [DE/US]; 29412 Clipper Way, Laguna Niguel, California 92677 (US). **SORENSEN, John, T.** [US/US]; 19 Barnstable Way, Ladera Ranch, California 92694 (US). **MIRHASHEMI, Soheila** [US/US]; 29412 Clipper Way, Laguna Niguel, California 92677 (US). **GERG, James, B.** [US/US]; 24725 Woodhill Lane, Lake Forest, California 92630 (US).

(74) Agent: **BUYAN, Robert, D.**; Stout, Uxa, Buyan & Mullins, LLP., 4 Venture, Suite 300, Irvine, California 92618 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

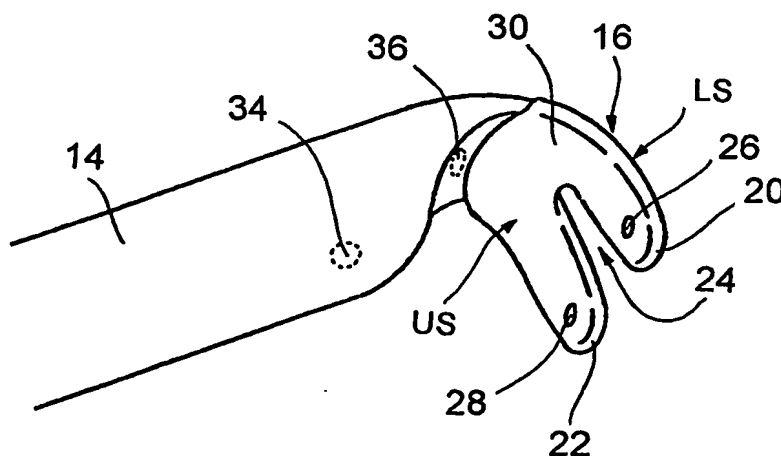
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ELECTROSURGICAL DEVICES AND METHODS FOR SELECTIVE CUTTING OF TISSUE



(57) Abstract: Methods and devices for cutting or coagulating. A device comprises a) an elongate member having a distal end, b) at least one foot member extending from the distal end of the elongate member, said foot member having an upper surface and a lower surface, c) an electrically and thermally insulating covering formed on at least the lower surface of the foot member and d) at least one electrode on the upper surface of the foot member. In operation, the at least one electrode is energized so as to cause cutting or coagulation of tissue located above the upper surface(s) of the foot member(s) while not causing substantial damage to tissue located below the lower surface(s) of the foot member(s).

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/110259 A3

(51) International Patent Classification⁷: **A61B 18/18**

(21) International Application Number:

PCT/US2004/018482

(22) International Filing Date: 10 June 2004 (10.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/477,258 10 June 2003 (10.06.2003) US

(74) Agent: BUYAN, Robert, D.; Stout, Uxa, Buyan & Mullins, LLP., 4 Venture, Suite 300, Irvine, California 92618 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except US*):
NEOMEDIX CORPORATION [US/US]; 27452 Calle Arroyo, San Juan Capistrano, California 92675 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **MITTELSTEIN, Michael** [DE/US]; 29412 Clipper Way, Laguna Niguel, California 92677 (US). **SORENSEN, John, T.** [US/US]; 19 Barnstable Way, Ladera Ranch, California 92694 (US). **MIRHASHEMI, Soheila** [US/US]; 29412 Clipper Way, Laguna Niguel, California 92677 (US). **GERG, James, B.** [US/US]; 24725 Woodhill Lane, Lake Forest, California 92630 (US).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

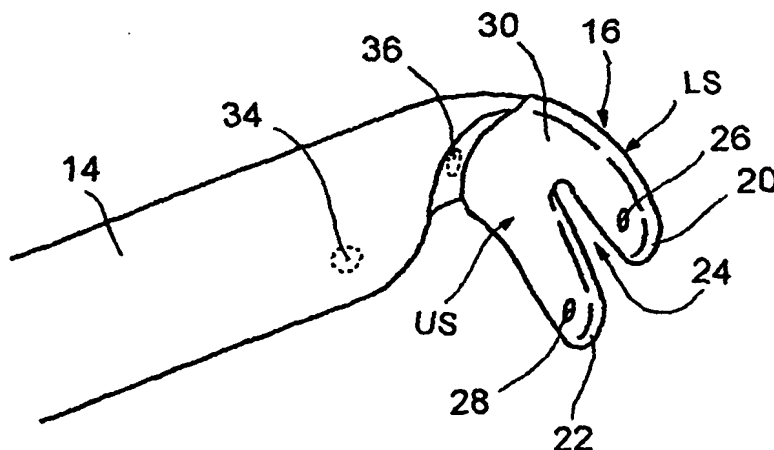
Published:

— with international search report

(88) Date of publication of the international search report:
21 April 2005

[Continued on next page]

(54) Title: ELECTROSURGICAL DEVICES AND METHODS FOR SELECTIVE CUTTING OF TISSUE



(57) Abstract: Methods and devices for cutting or coagulating tissue. A device comprises an elongate member (14) having a distal end, at least one foot member (16) extending from the distal end of the elongate member, said foot member (16) having an upper surface (US) and a lower surface (LS), an electrically and thermally insulating covering formed on at least the lower surface of the foot member and at least one electrode (26, 28) on the upper surface of the foot member (16). In operation, the at least one electrode (26, 28) is energized so as to cause cutting or coagulation of tissue located above the upper surface of the foot member (16) while not causing substantial damage to tissue located below the lower surface of the foot member (16).



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.